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# The Evaluation of the First Year of the Expansion of the Screening Assessment and Support Services (SASS) Program

Mental Health Services and Policy Program
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# I. EXECUTIVE SUMMARY

Commensurate to the initiation of Screening Assessment and Support Services (SASS) for all children and adolescents who are Medicaid eligible**,** the State of Illinois contracted for an evaluation of this program through Northwestern University's Mental Health Services and Policy Program. Supported by a Memorandum of Understanding, we undertook an evaluation of the SASS program for the fiscal year ending June 30, 2005. The evaluation was a multiple method approach to understand the implementation and impact of the SASS program from multiple perspectives. Among the indicators evaluated were the penetration of SASS services statewide, the utilization of services within episodes of care, the decision-making in regards to referrals to SASS, admission to psychiatric hospitals, the outcomes associated with SASS participation, and the satisfaction for multiple partners with the SASS process.

The evaluation combined utilization data reported by SASS workers, billing data reported to Healthcare and Family Services (HFS) (formerly the Department of Public Aid), and survey data collected from the following partners—parents and other caregivers, SASS program directors and agency directors, hospitals, and other (non-SASS) community behavioral healthcare providers. Decision analysis and outcomes data were collected through the use of the Childhood Severity of Psychiatric Illness (CSPI) which was completed by SASS workers at the initiation of screening and the end of the SASS episode of care. All SASS workers were trained in the reliable use of the CSPI and certified through the use of test case vignettes to ensure the accuracy of these data.

The results of the present evaluation in aggregate demonstrate that the provision of SASS services under The Children's Mental Health Act of 2003 has been a qualified success. *SASS was able to reach the target population of children and families*. Statewide, services are provided in a timely fashion to more than 15,000 children and adolescents. *SASS decision-making was clinically rational.* The decision-making with regard to the use of psychiatric hospital admissions versus intensive community services is relatively consistent across the state and across demographic groups. More than three quarters of decisions (77%) fit the decision support model. This is an impressive rate for a large public system. There were no large gender, age, or racial disparities in SASS performance, although it does appear the threshold for referral to Crisis and Referral Entry Service (CARES) and SASS is lower for White children and youth than for African Americans. *SASS was effective.* An episode of SASS care is associated with significant clinical and functional improvement, particularly a significant reduction in suicide risk and violence. While overall findings suggest that intensive community services are associated with better outcomes, it was clearly the case that children and youth who fit the decision support criteria for psychiatric hospital admission had better outcomes when hospitalized than when served in the community. Equally important, however, children and youth who did not meet the decision support criteria for hospital admission became worse when hospitalized.

In terms of satisfaction, most partners are satisfied with the CARES line and the process of receiving a SASS referral. In particular, parents and other caregivers report

high levels of satisfaction with this service. All partners view SASS as respectful and culturally sensitive. However, some partners are less satisfied with SASS than others. SASS agency directors were not satisfied with the business model and the speed with which they were paid. Hospitals that provide inpatient services for children and adolescents are less satisfied with SASS than hospitals that do not have such expertise. Community behavioral health providers often feel less involved in the service and safety planning processes utilized by SASS than they would prefer. In addition, while the overall decision making and outcomes were good, clear evidence exists of variation across agencies. Therefore, while the use of SASS to serve children and youth through Medicaid has proven to be generally effective, notable opportunities for improving the quality and outcomes of the SASS program exist.

In sum, the totality of the evaluation data suggests that the implementation of the CARES line and the provision of SASS services to all Medicaid eligible children and adolescents has been a qualified success:

- A substantial number of children and adolescents have been served.
- Parents are generally pleased with the services.
- SASS providers feel that they are able to deliver a high quality product
- Other system partners are generally satisfied with SASS.
- Decision-making with regard to the use of intensive community services and psychiatric hospitalization appears to be rational.
- Outcomes are generally good. Intensive community interventions appear to be particularly effective at reducing symptoms and risk behaviors and improving functioning. Outcomes are enhanced by appropriate dispositional decisions.

There do appear to be some areas for improvement. These can be summarized as follows:

- Providers who also serve children and adolescents do not always feel included in the SASS service delivery process.
- There is some variable concern about the professionalism of the CARES line staff and the manner in which they interact with referring individuals.
- SASS providers have some concerns about the viability of the business model and some have struggled to shift to a fee-for-service model.
- Variation across providers in terms of both decision-making and outcomes suggest that the SASS model has not been consistently implemented across the state.

While the evaluation effort this year has utilized data from multiple sources to address the most pressing questions with regard to understanding the impact of SASS on children and families, a number of questions remain unanswered. Among the questions that should be addressed through future evaluation efforts are the following:

- What is the youth perspective on CARES and SASS services?

- What are the differential parent/caregiver perspectives on intensive community services versus psychiatric hospital treatment?
- What is the cut-point at which the clinical benefits of psychiatric hospitalization outweigh those of intensive community interventions? Can that decision-model be communicated to SASS providers and psychiatrists in a way that improves practice?
- Can provider performance be improved through the use of report cards and other feedback and technical assistance strategies?
- Can we better understand racial and cultural factors? Why do African American children and youth present at a higher level of need? Why do Native Americans fair poorly?

The results of the present evaluation indicate that SASS is an effective program with a number of addressable issues identified that, if resolved, could lead it to be an even more effective program. Clearly FY06 priorities should include improving communication and collaboration, ensuring that the business model and the clinical model reinforce each other, and addressing performance variability among providers.

## II. BACKGROUND

The extension of the Screening Assessment and Support Services (SASS) program to serve all children and youth covered by Medicaid was an outcome of the Children's Mental Health Act of 2003. In early 2001, a group of advocates and educators pressed for the creation of the Children's Mental Health Task Force. This task force was created in June, 2002. In April of 2003, the task force published its final report: Children's Mental Health: An Urgent Priority for Illinois. Part of the impact of this report was legislation to improve mental health services for all publicly-funded children. The Children's Mental Health Act of 2003 (IL PA 93-0495) was signed into law by Governor Blagojevich in August of 2003.

One of the requirements of the Children's Mental Health Act was for the Department of Healthcare and Family Services (HFS) to implement pre-admission psychiatric hospital screening and assessment procedures for children. This mandate led HFS to partner with the two state code agencies which had already been providing pre-admission screening services to develop a protocol for an expansion of these services to all publicly funded children.

On July 1, 2004, Illinois's Healthcare and Family Services (HFS), working in collaboration with the Departments of Children and Family Services (DCFS) and Human Services (DHS), expanded the availability of the SASS program to all children who were covered by Medicaid or who were deemed presumptively eligible for Medicaid. SASS had previously been operated state-wide as two separate programs, one managed by the Department of Children and Family Services and the other operated by the Department of Human Services through its Division of Mental Health. The expansion required that all SASS providers respond to a Request for Proposal to bid on the provision of these services. In July of 2004, 44 SASS primary contractors began offering services state-wide through this program. Each SASS program is responsible for a specific geography (i.e., area of the state). Some of these providers subcontract with other agencies to provide sufficient geographic coverage of their service areas.

As a component of the expansion of SASS, a central phone intake and referral process was created called the Crisis and Referral Entry Service (CARES). The CARES line takes calls from anyone wishing to refer a child or youth for a SASS assessment. The staff on the CARES line performs a simple screening process to ensure the appropriateness of the referral. If the child or youth meets a defined level of acuity, the CARES staff then refers that individual to the SASS program consistent with the child's geographical location. For all referred children and youth, SASS programs provide both screening and crisis intervention and support services. Thus, SASS workers will perform an assessment to determine whether to provide intensive community services or consider a psychiatric hospital admission. If the child is hospitalized, they provide ongoing monitoring and discharge planning services and help in the child's transition back to the community. If the child is not hospitalized, then SASS provides community stabilization services to ensure that the needs of the child and family are met. The

expected duration of SASS services is 90 days; however, SASS programs can request an extension if it is indicated by the clinical circumstances of the case.

The Mental Health Services and Policy Program (MHSPP) was selected to perform the first year evaluation of the SASS program primarily because of its nearly decade-long experience evaluating and monitoring the SASS program provided through the auspices of DCFS. In addition, John S. Lyons, Ph.D., the Director of MHSPP, is the developer of the Childhood Severity of Psychiatric Illness (CSPI), which is the decision support/outcomes monitoring tool selected to be used within the SASS expansion. In part through the use of the CSPI over a number of years to support clinically driven decisions regarding the use of intensive community support or psychiatric hospital admissions, DCFS was able to reduce and practically eliminate racial disparities in psychiatric hospital admission.

The evaluation process was organized with two levels of collaboration. The evaluation Executive Committee was comprised of Dr. Lyons and Lynn Steiner (Projector Coordinator) from Northwestern University and representatives of the Departments of Healthcare and Family Services (Toni Rozanski), Children and Family Services (Stephanie Hanko and Jane Hastings), and Human Services (Dessie Trohalides). This committee provided direction to the evaluation efforts and facilitated access to information in support of the evaluation.

The Evaluation Advisory Committee includes all members of the Executive Committee and representatives of the various partners affected by the SASS expansion. The membership of this committee includes the following individuals:

| | |
|---|---|
| Bryan Austin | DCFS Youth Advisory Board |
| Terry Carmichael | Community Behavioral Healthcare Association |
| Heather Eagleton-Hemly | Illinois Association of Rehabilitation Facilities |
| Gaylord Gieseke | Voices for Children, Children's Mental Health Partnership |
| Scott Leon | Loyola University, Department of Psychology |
| Kim Miller | Parent Representative |
| Mark Moses | Ada S. McKinley Community Services, Inc. |
| Patrick Phelan | Children's Home Association of Illinois |
| Rita Thorpe | Leyden Family Services |
| Amy Starin | DHS, Division of Mental Health |
| Penny Weedon | Robert Young Center |
| Linda Weiss | Coles County Mental Health Center |

The Advisory Committee reviewed all surveys and reports and gave feedback to the evaluator regarding methods, measures, and dissemination strategies.

## III. DATA AND METHODS

The evaluation approach was multi-method and involves the convergence of data from multiple sources. Three primary sources were used. Healthcare and Family Services data from the claims database were used to establish baseline data and estimate service use patterns. Claims data has the advantage that SASS programs and hospitals should be highly motivated to submit information consistently to HFS in order to secure payment for services. Claims data has the disadvantage that providers have up to 12 months after the date of service provision in order to submit a claim. Thus the use of claims data to fully evaluate SASS service provision likely underestimates the intensity, frequency and duration of SASS interventions.

The second data source used for the evaluation was screening and assessment data reported by SASS agencies to Northwestern University's Mental Health Services and Policy Program (MHSPP) and used to evaluate decision-making and outcomes. Screening and assessment data has the advantage that it contains information specific to the child and family and allows for a more detailed understanding of the performance of the services. These data have the disadvantage that some SASS providers might be less motivated to submit these data as no clear financial incentives exist for their completion and submission. In addition, clinical assessment information obtained in the field can be notoriously unreliable. To reduce problems of reliability, we insisted that all SASS workers receive training in the use of the assessment instrument and become certified by demonstrating their reliability on a test case vignette. Statewide, 167 SASS workers were certified in the reliable use of the Childhood Severity of Psychiatric Illness (CSPI). Their average reliability was 0.80 which is evidence of very good reliability.

SASS agencies use the CSPI as a decision support and outcomes measure. A copy of the CSPI manual can be found in Appendix A to this report. One of the uses of the CSPI is to model decision-making with regard to psychiatric hospitalization. The basic structure of the CSPI is composed of 27 items and each item has anchored four-point rating scales. However, those anchored definitions are designed to translate into the following four action levels:

0 No evidence, no need for action. There is no reason to believe this is a need at this time.
1 Watchful waiting, prevention. There is a history of problems or there is suspicion of problems.
2 Action. The need is interfering in the child's, family's, or community's functioning and/or wellbeing and it must be addressed.
3 Immediate or intensive action. This need is dangerous or disabling.

Based on this measurement model, it is possible to identify which children and adolescents may be in need of a secure psychiatric hospital admission. Specifically, a rating of '3' on one of the following items would indicate an individual who is either acutely dangerous or disabled:

- Neuropsychiatric Disturbance (includes all DSM-IV psychoses)
- Emotional Disturbance (includes all DSM-IV affective disorders)
- Impulsivity (includes ADHD and other disorders of impulse)
- Suicide Risk
- Danger to Others

In addition, since disorders involving psychotic symptoms (e.g., hallucinations, delusions) are less predictable and often difficult to treat or manage, a combination of a '2' on Neuropsychiatric Disturbance and a '2' on either Suicide Risk or Danger to Others would likely warrant consideration of admission to a secure psychiatric hospital admission

Detailed definitions of these items can be found in the CSPI manual in Appendix A. It is important to note that the CSPI is a decision support tool, not an expert system. There certainly are children whose circumstances may necessitate psychiatric hospital admission who do not fit the above decision model. Likewise, there will be children who fit the above criteria but for whom circumstances allow them to be treated in the community with intensive services.

The third data source includes survey results used to assess the multiple perspectives of the various partners in the SASS program. Hospital representatives, SASS program directors and their agency directors, and community mental health providers who do not provide SASS services were surveyed directly. Consistent with HIPAA requirement, parents and caregivers were recruited to complete surveys by the SASS worker themselves. All data collection, storage, and analyses were compliant with HIPAA guidelines.

## IV. UTILIZATION OF SASS SERVICES

The Request for Proposal estimated that about 19,000 SASS screenings would be provided to children and youth. Further, prior hospitalization data estimated that approximately 10,000 children and youth are admitted to a psychiatric hospital each year in Illinois.

In the first year of the SASS program for Medicaid, a total of 15,226 initial screenings were received by Northwestern University. Of these, 9,884 children and youth were admitted into a psychiatric hospital. Thus, since screening signals the beginning of an episode of care in SASS, SASS episodes occurred at about 80% of the expected rate. The total number of hospitalizations is comparable to levels anticipated by historical trends.

Several limitations must be considered in interpreting these basic utilization numbers. First, although we strived to ensure that all SASS workers reported all episodes of service to Northwestern University, it is possible that some episodes went unreported. Some data might have been inadvertently lost during the process of agencies reporting to Northwestern. Thus it is likely that the actual numbers of screenings are at least a little higher than reported. However, there is no reason to believe that substantially more screenings occurred than were reported. Regular monthly reports on the numbers of screenings reported were given to all providers and they had the opportunity to correct any counts that appeared incorrect. Efforts to continue to improve the accuracy of data on the number of episodes of SASS care are underway, including the implementation of a web-based data management system that links SASS data directly to eligibility data collected by HFS and CARES.

The same logic holds for hospital admission, although it is likely that SASS programs reported on most cases in which a hospitalization occurred (due to the high profile of these cases for the SASS workers and programs), reducing the size of any potential underestimate of hospital admissions. In other words, we believed that missed episodes of care mostly involved short-term interventions in the community (i.e., the lowest profile cases for SASS workers and programs). The comparison of hospital admissions based on HFS claims data to that based on SASS program reports to Northwestern is potentially problematic due to the differences in methods. Since hospitals still have a considerable amount of time to bill for care provided in the past fiscal year, accurate billing data is not yet available for the first year of the SASS program for Medicaid.

Table 1 presents screenings by region. Not surprisingly, Cook County saw the greatest number of SASS screenings with slightly more than 7,000 and Southern saw the fewest with slightly more than 1,000.

**Table 1. FY05 SASS Utilization by Region, for Screens Performed 07/01/04 through 6/30/05.**

| Region | Total | Community Stabilization | % | Psychiatric Hospitalization | % |
|---|---|---|---|---|---|
| Statewide | 15,226 | 5,342 | 35.1% | 9,884 | 64.9% |
| Cook County | 7,047 | 1,980 | 28.1% | 5,067 | 71.9% |
| Central | 4,414 | 1,944 | 44.0% | 2,470 | 56.0% |
| Northern | 2,586 | 965 | 37.3% | 1,621 | 62.7% |
| Southern | 1,179 | 453 | 38.4% | 726 | 61.6% |

Figure 1 presents the rate of hospital admissions for all screenings by month. While the rate of hospital admissions peaked at the start of the fiscal year and was lower for the rest of the year, there was an increase during the last month of the fiscal year. This figure suggests that while SASS workers appear to improve the likelihood of utilizing intensive community interventions after the first two months, there may be a trend over time to return back towards the initial baseline rate of hospitalizing about two-thirds of all screenings.

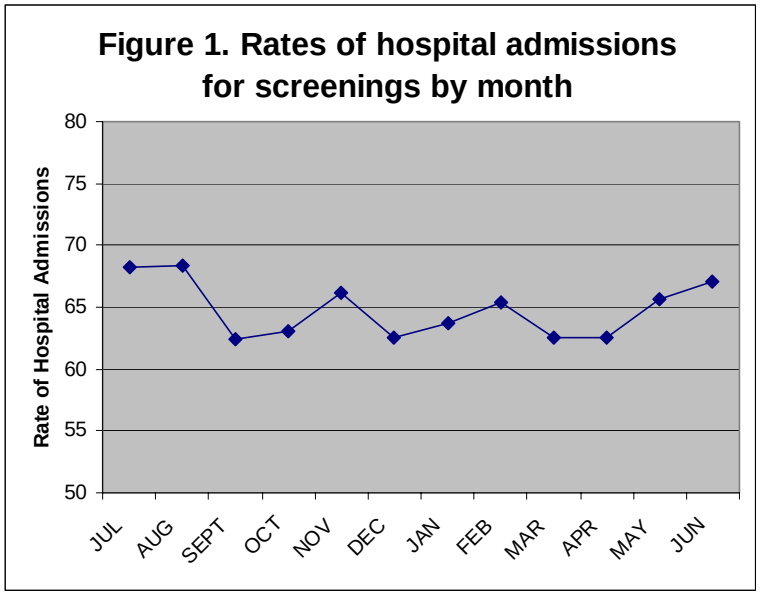



Table 2 presents the distribution of screenings and psychiatric hospital admissions broken out by gender, age, and race. There are about 600 fewer screenings represented in this table because gender, age, and race were sometimes missing from reports

submitted by SASS workers. Missing data were not included. There were slightly more boys served than girls overall. In addition, boys tended to be assessed as having high-risk symptoms and behaviors. There did not appear to be any differences in rates of hospitalization between boys and girls. About two-thirds of all SASS referrals were followed by a psychiatric hospital admission.

The majority of SASS screenings involved adolescents. Only a small percentage of referrals to SASS were for children under five years old (2%). The most common ages were 13 to 15 years old (38%). However, about one quarter (27%) of all SASS referrals were for children ages six to 12. The likelihood of psychiatric hospital admission increased with age, from 56% for children five and under to 68% of youth 16 years or older. This finding is consistent with other findings that adolescents are generally more difficult to control than children and thus sometimes require more intensive levels of care.

White children (49%) were the most common racial group served, although a substantial percentage of children were African American (39%). There was a tendency for African American children to be hospitalized more frequently than White children; however, this appears to be the result of African American children being assessed as having higher risk symptoms and behaviors at SASS screening. Thus, while there was a racial disparity in hospitalization rates it may reflect an actual racial disparity in the threshold for referring children and youth to SASS services rather than a hospital admission threshold difference. In other words, it appears that African American children and youth are seen at a point when they present with more symptoms and higher levels of risk behaviors than do White children. This suggests challenges in the process of detection and referral from the community to SASS rather than a problem with how CARES or SASS serves African American children and youth. More discussion on evaluating racial disparities in psychiatric hospital admissions can be found in the Section V. Decision Analysis.

**Table 2. FY05 SASS Utilization by Gender, Age and Race, for Screens Performed 07/01/04 through 06/30/05.**

| | Total | % | Community Stabilization | % | Psychiatric Hospitalization | % |
|---|---|---|---|---|---|---|
| **GENDER** | | | | | | |
| Male | 7364 | 51% | 2617 | 36% | 4747 | 64% |
| Female | 7063 | 49% | 2498 | 35% | 4565 | 65% |
| **AGE** | | | | | | |
| < 5 | 325 | 2% | 142 | 44% | 183 | 56% |
| 6 – 12 | 3877 | 27% | 1484 | 38% | 2393 | 62% |
| 13-15 | 5591 | 38% | 2004 | 36% | 3587 | 64% |
| 16 > | 4622 | 32% | 1480 | 32% | 3142 | 68% |
| **RACE** | | | | | | |
| Black | 5483 | 39% | 1812 | 33% | 3671 | 67% |
| Hispanic | 1288 | 9% | 410 | 32% | 878 | 68% |
| Asian/Oriental | 43 | <1% | 15 | 35% | 28 | 65% |
| White | 6903 | 49% | 2618 | 38% | 4285 | 62% |
| American Indian/Eskimo | 18 | <1% | 5 | 28% | 13 | 72% |
| Other | 471 | 3% | 177 | 38% | 294 | 62% |

Table 3 presents screening by participating SASS agencies. In addition, by each agency name there is an indicator of whether or not its LAN contains psychiatric hospital beds for adults and for children and adolescents. This is an important indicator in that it is generally easier to obtain a psychiatric hospital admission if the hospital serves the geographic area in which the child and family live. In addition, parental and caregiver involvement during the hospital stay is easier when the hospital is closer to home. Also, many children and families appear at emergency rooms when in crisis, so the potential for providing community stabilization services decreases when the child and family have already presented at a hospital setting. The role of hospital availability on admission rates both in terms of location and bed availability requires further study.

Subcontracting agencies are reported under the agency that holds the contract with the State of Illinois. In this table, substantial variation can be seen across the 55 agencies which contract and subcontract to provide SASS services. One Cook County provider served more than 1,000 children and adolescents through fiscal year 2005 (FY05); of these, 66.9% were hospitalized. In contrast, five agencies served ten or fewer children. Of the 35 children served by these five agencies, 14 (40%) were hospitalized.

## Table 3. FY05 SASS Utilization by Provider, for Screens Performed 07/01/04 through 06/30/05.

| Type of Hospital in LAN | | Sub-Contracted SASS provider | Screenings reported** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Served in Community | | | | Hospitalized | | | |
| | | | | Total | | High risk* children and adolescents | | Total | | Low risk* children and adolescents | |
| Adult | C & A | | Screening provider | N | N | % | N | % | N | % | N | % |
| | | | **Total screens** | 15,226 | 5,342 | 35.1 | 1,546 | 28.9 | 9,884 | 64.9 | 2,256 | 22.8 |
| X | | | Ada S. McKinley Community Services, Inc. | 667 | 278 | 41.7 | 47 | 16.9 | 389 | 58.3 | 59 | 15.2 |
| | | | Ben Gordon Center | 62 | 17 | 27.4 | 4 | 23.5 | 45 | 72.6 | 8 | 17.8 |
| | | | Bridgeway | 218 | 137 | 62.8 | 34 | 24.8 | 81 | 37.2 | 12 | 14.8 |
| X | | | Catholic Charities Diocese | 150 | 95 | 63.3 | 32 | 33.7 | 55 | 36.7 | 19 | 34.5 |
| | | | Center for Children's Services (Starting 1/1/05) | 97 | 67 | 69.1 | 31 | 46.3 | 30 | 30.9 | 3 | 10.0 |
| X | X | | Children's Home Association of Illinois | 718 | 288 | 40.1 | 71 | 24.7 | 430 | 59.9 | 90 | 20.9 |
| X | | | Coles County Mental Health Association, Inc. | 277 | 146 | 52.7 | 59 | 40.4 | 131 | 47.3 | 22 | 16.8 |
| | | | Community Care Options | 923 | 232 | 25.1 | 25 | 10.8 | 691 | 74.9 | 200 | 28.9 |
| X | X | | Community Counseling Center of Chicago | 1,085 | 359 | 33.1 | 56 | 15.6 | 726 | 66.9 | 229 | 31.5 |
| X | X | | Community Counseling Ctr. of Northern Madison County | 235 | 48 | 20.4 | 9 | 18.8 | 187 | 79.6 | 90 | 48.1 |
| | | | Community Mental Health Council | 320 | 80 | 25.0 | 19 | 23.8 | 240 | 75.0 | 40 | 16.7 |
| | | | Community Resource Center | 66 | 26 | 39.4 | 5 | 19.2 | 40 | 60.6 | 8 | 20.0 |
| X | | | Comprehensive Mental Health Center | 66 | 21 | 31.8 | 5 | 23.8 | 45 | 68.2 | 11 | 24.4 |
| X | X | | Crosspoint Human Services | 788 | 333 | 42.3 | 110 | 33.0 | 455 | 57.7 | 50 | 11.0 |
| X | X | | DuPage County Health Department | 542 | 172 | 31.7 | 69 | 40.1 | 370 | 68.3 | 121 | 32.7 |

*Level of risk determined by severity on CSPI items predictive of hospitalization versus service in the community.

**Data from incomplete CSPIs are not included.

## Table 3 Continued

| Type of Hospital in LAN | | Sub-Contracted SASS provider | Screening provider | Screenings reported** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Served in Community | | | | Hospitalized | | | |
| | | | | | Total | | High risk* children and adolescents | | Total | | Low risk* children and adolescents | |
| Adult | C & A | | | N | N | % | N | % | N | % | N | % |
| | | | **Total screens** | 15,226 | 5,342 | 35.1 | 1,546 | 28.9 | 9,884 | 64.9 | 2,256 | 22.8 |
| X | | | Egyptian Public and Mental Health Department | 87 | 30 | 34.5 | 15 | 50.0 | 57 | 65.5 | 7 | 12.3 |
| | | | Family Counseling Center, Inc. | 129 | 73 | 56.6 | 21 | 28.8 | 56 | 43.4 | 9 | 16.1 |
| X | X | | Family Service Association of Greater Elgin Area | 550 | 209 | 38.0 | 44 | 21.1 | 341 | 62.0 | 70 | 20.5 |
| | | | Franklin-Williamson Human Service, Inc. | 96 | 27 | 28.1 | 12 | 44.4 | 69 | 71.9 | 10 | 14.5 |
| X | X | | Grand Prairie Services | 697 | 169 | 24.2 | 28 | 16.6 | 528 | 75.8 | 151 | 28.6 |
| X | | | Heartland Human Services | 41 | 13 | 31.7 | 3 | 23.1 | 28 | 68.3 | 7 | 25.0 |
| X | X | | Helen Wheeler Center for Community Mental Health | 317 | 149 | 47.0 | 59 | 39.6 | 168 | 53.0 | 30 | 17.9 |
| X | X | | Heritage Behavioral Health Center, Inc. | 447 | 191 | 42.7 | 57 | 29.8 | 256 | 57.3 | 80 | 31.3 |
| | | X | *--DeWitt County Human Resource Center* | 13 | 8 | 61.5 | 4 | 50.0 | 5 | 38.5 | 0 | 0.0 |
| | | X | *--Piatt County Mental Health Center* | 3 | 0 | 0.0 | 0 | 0.0 | 3 | 100.0 | 1 | 33.3 |
| | | | Kids Hope United | 271 | 109 | 40.2 | 36 | 33.0 | 162 | 59.8 | 32 | 19.8 |
| | | | Human Service Center | 14 | 5 | 35.7 | 2 | 40.0 | 9 | 64.3 | 2 | 22.2 |
| | | | Human Support Services | 9 | 3 | 33.3 | 2 | 66.7 | 6 | 66.7 | 1 | 16.7 |
| | | | Institute for Human Resources | 55 | 38 | 69.1 | 13 | 34.2 | 17 | 30.9 | 1 | 5.9 |
| | | | Jane Addams Family Counseling Ctr of Stephenson Cty | 93 | 40 | 43.0 | 16 | 40.0 | 53 | 57.0 | 9 | 17.0 |
| X | X | | Janet Wattles Center, Inc. | 499 | 198 | 39.7 | 99 | 50.0 | 301 | 60.3 | 47 | 15.6 |
| X | X | | Jewish Children's Bureau | 49 | 22 | 44.9 | 7 | 31.8 | 27 | 55.1 | 11 | 40.7 |
| | | | Kenneth W. Young Centers | 1,104 | 254 | 23.0 | 63 | 24.8 | 850 | 77.0 | 148 | 17.4 |
| X | X | | Lake County Health Department and Community Health | 421 | 158 | 37.5 | 71 | 44.9 | 263 | 62.5 | 30 | 11.4 |

*Level of risk determined by severity on CSPI items predictive of hospitalization versus service in the community.

**Data from incomplete CSPIs are not included.

## Table 3 Continued

| Type of Hospital in LAN | | Sub-Contracted SASS provider | | Screenings reported** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Served in Community | | | | Hospitalized | | | |
| | | | | | Total | | High risk* children and adolescents | | Total | | Low risk* children and adolescents | |
| Adult | C & A | | Screening provider | N | N | % | N | % | N | % | N | % |
| | | | **Total screens** | 15,226 | 5,342 | 35.1 | 1,546 | 28.9 | 9,884 | 64.9 | 2,256 | 22.8 |
| X | X | | Leyden Family Service and Mental Health Center | 812 | 97 | 11.9 | 19 | 19.6 | 715 | 88.1 | 169 | 23.6 |
| | | | McHenry County Mental Health Board | 251 | 87 | 34.7 | 29 | 33.3 | 164 | 65.3 | 24 | 14.6 |
| | | | McLean County Center for Human Services | 5 | 3 | 60.0 | 0 | 0.0 | 2 | 40.0 | 1 | 50.0 |
| X | X | | Mental Health Centers of Central Illinois | 460 | 206 | 44.8 | 56 | 27.2 | 254 | 55.2 | 72 | 28.3 |
| | | X | *--Christian County Mental Health* | 18 | 5 | 27.8 | 1 | 20.0 | 13 | 72.2 | 2 | 15.4 |
| | | X | *--Logan County Health Department* | 19 | 10 | 52.6 | 8 | 80.0 | 9 | 47.4 | 1 | 11.1 |
| X | X | | Metropolitan Family Services | 410 | 152 | 37.1 | 42 | 27.6 | 258 | 62.9 | 58 | 22.5 |
| X | | | Mount Sinai Hospital | 178 | 26 | 14.6 | 9 | 34.6 | 152 | 85.4 | 31 | 20.4 |
| | | X | *--Mujeres Latinas en Accion* | 120 | 6 | 5.0 | 1 | 16.7 | 114 | 95.0 | 19 | 16.7 |
| X | X | | North Central Behavioral Health Systems | 283 | 50 | 17.7 | 17 | 34.0 | 233 | 82.3 | 58 | 24.9 |
| | | | Provena Behavioral Health (Ending 12/31/04) | 96 | 50 | 52.1 | 15 | 30.0 | 46 | 47.9 | 6 | 13.0 |
| X | X | | Robert Young Center | 421 | 201 | 47.7 | 55 | 27.4 | 220 | 52.3 | 49 | 22.3 |
| | | | Schuyler County Mental Health Services | 18 | 9 | 50.0 | 2 | 22.2 | 9 | 50.0 | 3 | 33.3 |
| | | X | *--Cass County MHC* | 8 | 3 | 37.5 | 2 | 66.7 | 5 | 62.5 | 0 | 0.0 |
| | | X | *--Morgan Scott Mental Health* | 10 | 5 | 50.0 | 1 | 20.0 | 5 | 50.0 | 2 | 40.0 |
| X | | | Sinnissippi Centers, Inc. | 166 | 84 | 50.6 | 67 | 79.8 | 82 | 49.4 | 8 | 9.8 |
| | | | Southeastern Illinois Counseling Centers, Inc. | 88 | 46 | 52.3 | 27 | 58.7 | 42 | 47.7 | 7 | 16.7 |
| | | | Southern Illinois Regional Social Services | 86 | 55 | 64.0 | 14 | 25.5 | 31 | 36.0 | 10 | 32.3 |
| X | X | | Transitions of Western Illinois | 229 | 47 | 20.5 | 15 | 31.9 | 182 | 79.5 | 65 | 35.7 |

*Level of risk determined by severity on CSPI items predictive of hospitalization versus service in the community.

**Data from incomplete CSPIs are not included.

In addition to service utilization, the timeliness of the response by CARES and SASS was evaluated by the DHS/DMH Child and Adolescent Statewide Service System in March and April of 2005. A sample of 500 CARES calls were analyzed for efficiency

of referrals to SASS. The time between the initial referral to CARES and the CARES call to SASS was, on average, 16.7 minutes: 48% occurred within 10 minutes, 35% occurred within 11 to 20 minutes, 10% occurred between 21 and 30 minutes, 4% occurred between 30 and 60 minutes, and 3% took more than 60 minutes to complete. Thus, 93% of all CARES calls resulted in a SASS referral within 30 minutes or less. These findings are well within the guidelines of the RFP.

The time interval between the referral to SASS and the SASS response was similarly assessed. The average response time was 8.1 minutes: 75% occurred within 10 minutes, 16% occurred in 11 to 20 minutes, 5% occurred in 21 to 30 minutes, 3% occurred between 31 and 60 minutes, and 1% required more than 60 minutes. Thus, 96% of all SASS responses occurred within 30 minutes of the CARES referral to SASS.

**Service Use**

The only available source of services utilized within the SASS program is the claims data collected by HFS. In the claims data, services are divided into on-site and off-site services. For FY05 as of 7/12/05, a total of 178,703 on-site units of service were billed and a total of 347,734 off-site units of service were billed. Given the 12-month window from time of service to billing, this amount can be expected to increase. The ratio of on-site to off-site services was 0.66.

While the goals of the present evaluation do not include a detailed analysis of service use nor do we currently have the capacity to tie individual service use back to outcomes, it is instructive for the purposes of the present evaluation to inventory the general distribution of the most commonly billed services.

| Service Category | On-site Units | % | Off-site Units | % |
|---|---|---|---|---|
| Case Management | 71,976 | 40% | 67,497 | 19% |
| Therapy/counseling | 41,538 | 23% | 126,857 | 36% |
| Assessment | 24,392 | 14% | 41,211 | 12% |
| Crisis Intervention, including pre-screening | 17,657 | 10% | 73,416 | 21% |
| Treatment Planning | 7,785 | 4% | 19,623 | 5% |
| Behavioral services | 6,692 | 4% | 32,641 | 9% |
| Psychotropic Meds | 3,713 | 2% | 280 | >1% |
| Skill Training | 828 | >1% | 249 | >1% |
| Activity Therapy | 325 | >1% | 590 | >1% |

# V. DECISION ANALYSIS

## A. CARES DECISION ANALYSIS

In order to better understand the role of CARES in referring children and adolescents to SASS, a random sample of 203 CARES referrals were taken and evaluated compared to the CSPIs completed by SASS at the initial screening following referral. The distribution of the responses to the CARES screening items were as follows:

| | %Yes | %No |
|---|---|---|
| Has youth made statements involving wishes to harm self* | 35.0 | 65.0 |
| Has youth described specific plan for harming self* | 10.8 | 89.2 |
| Does youth have access to means to carry out plan of self-harm* | 5.9 | 94.1 |
| Has youth made prior attempts to harm self* | 24.6 | 75.4 |
| Has youth made deliberate attempts to harm self* | 20.7 | 79.3 |
| Has youth severely harmed someone* | 22.7 | 77.3 |
| Is youth dangerously out of control* | 45.8 | 54.2 |
| Is youth displaying bizarre behavior* | 10.8 | 89.2 |
| Is youth killing, maiming or torturing animals | 2.0 | 98.0 |
| Is youth essentially presenting oppositional or undesirable behavior | 14.8 | 85.2 |
| Is youth displaying aggressive sexual behavior | 1.0 | 99.0 |
| Is youth primarily involved in delinquent behavior | 7.4 | 92.6 |
| Does youth have prior psychiatric hospitalizations | 52.7 | 47.3 |
| Is psychotropic medication currently being prescribed | 56.2 | 43.8 |
| If yes, is the youth non-compliant with medication | 22.7 | 77.3 |

*These items reflect symptoms that might inform psychiatric hospital admission decisions.

Review of these responses indicated that a prior history of psychiatric hospitalization and current psychotropic medication along with 'out of control' behavior are the more common screening factors for SASS referrals. Statements and actions regarding self harm are common. Violence against others is also common.

In 62 of 69 cases (90%) SASS workers agreed with the CARES acuity screen that an indication of a youth's wishes for self-harm was present. This detection rate was even higher for youth who had a specific plan according to the CARES acuity screen (95%). SASS workers observed acute Suicide Risk in only 11 of 128 cases that did not meet this CARES screen item. This is not surprising given that SASS uses a face-to-face interview with the child or youth for an assessment which is more likely to elicit direct information on suicidal ideation. Thus, the sensitivity of the wishes to harm self item on the CARES acuity screen was estimated at 0.90 with a specificity of 0.91. In other words, the CARES acuity scale appears to do a good job of identifying cases in need of intervention (i.e., sensitivity) without over-identifying a large number of cases that do not require intervention (i.e., specificity) on this dimension.

For Danger to Others, the SASS worker agreed on 43 of 46 cases in which the CARES referral indicated that the youth had severely harmed another and that danger to others was present (93.4%). However, SASS workers observed acute Danger to Others on 21 of 150 cases that did not meet this screening standard (14%). Thus this item's sensitivity was 0.93 and specificity was 0.86.

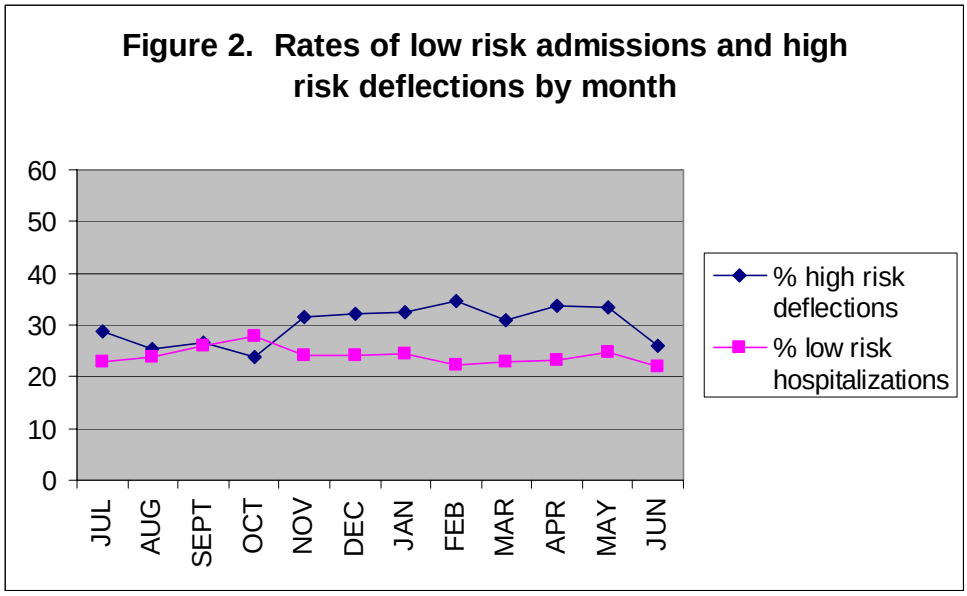
## B. SASS DECISION ANALYSIS

As seen in Table 1, across the state 23% of all hospital admissions would be characterized as low risk. This means that 77% of all hospital admissions fit the above decision model. This is actually quite impressive. In a tightly managed private emergency room setting, the highest expected rate of high-risk admissions is not more than 85% to 90%. So, a state-wide rate in a Medicaid population of 77% is quite good for the first year of this initiative. When SASS served only DCFS children, initially 66% of cases fit the decision model. It appears that the experiences of the SASS program prior to this past year may have informed its success in matching children to community- versus hospital-based services.

There was some variation in low-risk admissions by region. Interestingly, the most low-risk hospital admissions were in Southern and Cook. Northern had the lowest percentage of low-risk admissions.

The rate of high-risk community stabilizations was 29%. Northern had the highest percent of high-risk community stabilizations. These two findings suggest that the Northern region either has the least access to psychiatric hospital services or the greatest ability to effectively provide intensive community-based services. The fact that one of the largest agencies in the region in terms of SASS screenings has access to both adult and child and adolescent beds in its Local Area Network (LAN) may suggest that the region is strong on intensive community services. However, more analyses regarding provider performance and the sustainability of the SASS intervention are required to fully address this question.

Figure 2 provides the monthly rate of low risk admissions and high-risk community stabilization. Review of these data suggests that over the course of the year, there was a gentle trend for SASS programs to serve increasingly challenging youth with intensive community services rather than psychiatric hospitalization. The probability of hospitalizing a 'low-risk' child or adolescent remain relatively stable although there was a slight trend for fewer low-risk admission over the course of the year. The percent of high-risk community stabilizations generally increased over the course of the fiscal year.




Referring back to Table 3, all agencies are profiled based on the rate of 'low-risk admissions' and 'high-risk deflections.' Although, for the most part, the decision-making with regard to psychiatric hospital admissions versus intensive community services appears consistent across the state, there is observable variation in decision-making across agencies. Of agencies serving at least 100 children and adolescents, the highest rate of low-risk admissions was 48% while the lowest rate was 10%.

As mentioned above, for the agency with the highest rate of high-risk community stabilization cases for those serving more than 100 children and adolescents, half of the children and adolescents served in the community had symptoms and risk behaviors consistent with psychiatric hospital admissions. This finding suggests that this agency may have one of the more sophisticated community interventions or less access to psychiatric hospital services. The agency that had only a 1.6% rate of high-risk children and youth served with community stabilization suggests that this agency was not comfortable serving high-risk children and adolescents with intensive community services. In order to fully understand the implications of these data, it will be necessary to evaluate each agency's rate of representation and functional improvement.

To better understand the role of symptom, risk and caregiver characteristics in the use of psychiatric hospitalizations, all CSPI ratings at the initial screening were entered into a logistic regression model predicting whether or not the child or youth was hospitalized at any point during the SASS episode of care. Table 4 presents the CSPI items that were significant predictors of hospital admission. Overall, 78% of cases were accurately classified, which is statistically significant.

**Table 4. Individual items of the Childhood Severity of Psychiatric Illness (CSPI) provided at the original screening that significantly predict a psychiatric hospitalization at any time during the SASS episode of care.**

| CSPI Item | B | S.E. | Wald | p | Implications |
|---|---|---|---|---|---|
| Suicide Risk | 0.72 | 0.05 | 205.36 | .000 | Greater suicide risk is associated with increase risk of admission |
| Danger to Others | 0.62 | 0.06 | 113.73 | .000 | Greater danger to others is associated with increased risk of admission |
| Neuropsychiatric Disturbance | 0.37 | 0.65 | 31.75 | .000 | Psychotic symptoms are associated with increased risk of admission |
| Emotional Disturbance | 0.37 | 0.65 | 31.45 | .000 | Higher levels of depression and anxiety are associated with increased risk of admission |
| Impulsivity | 0.30 | 0.61 | 24.36 | .000 | Symptoms of impulse control problems are associated with increased risk of admission |
| Elopement | 0.23 | 0.05 | 19.42 | .000 | Running away is associated with increased risk of admission |
| Unavailability of Services | 0.29 | 0.09 | 9.36 | .002 | Available community services is associated with lower risk of admission |
| Family Functioning | 0.17 | 0.06 | 8.44 | .004 | Family problems are associated with increased risk of admission |
| Adjustment to Trauma | -0.09 | 0.05 | 3.87 | .049 | Trauma experiences are associated with a decreased risk of admission |
| Caregiver Lack of Knowledge | -0.19 | 0.09 | 4.85 | .028 | Knowledgeable caregivers' children are more likely to be admitted to hospital |
| Multi-system involvement | -0.17 | 007 | 5.56 | .018 | Children involved in multiple systems are less likely to be admitted |

Note: To interpret this table, one needs to study the regression weights (B). S.E. is the standard error of these regression weights. The 'Wald' statistic is the standard logistic regression test of whether the regression weight is different from zero (i.e. there is a statistically significant relationship between the CSPI items and the decision to treat in the community).

All these weights are statistically significant (i.e., different) from zero indicating that the CSPI items have a statistically significant relationship to the hospitalization versus intensive community intervention decision. A positive B indicates that higher ratings on the CSPI item are related to an increased likelihood of hospital admission. A negative B indicates that higher the rating on the CSPI item is related to an increased likelihood of an intensive community intervention. In general, the more symptomatic the child, the greater the likelihood of hospital admission. Similarly the greater the propensity towards high risk behavior, the greater the likelihood of hospital admission. These findings are exactly as they should be in a well-functioning crisis assessment and triage program. Several items had negative B. Thus, children and youth with recognized trauma problems, including Post Traumatic Stress Disorder (PTSD), were more likely to be served in the community. Youth with caregivers who were seen as knowledgeable, were more likely to be admitted into the hospital. This finding may seem counter-

intuitive; however, it replicates findings elsewhere. It appears that when a SASS worker has concerns about the caregiver's knowledge, the intervention is more likely to include a direct educational intervention with the caregiver and reduce the need for hospitalization. A crisis circumstance with a knowledgeable caregiver is often involves concerns about the safety of the child. Finally, youth with complex multi-system involvements (e.g. DCFS, juvenile court) were more likely to be served in the community. These findings also are consistent with sound clinical decision-making in the SASS program.

## VI. OUTCOMES

There are a variety of ways in which the CSPI can be used as an outcome monitoring tool. The standard method is to sum the items within domains (e.g. symptoms, risk behaviors, functioning) and study change over time on these scale scores. Table 5 presents the overall analysis of change for all children and adolescents for whom both a completed CSPI at screening and at termination of the SASS episode of care were submitted to Northwestern University during last fiscal year. As can be seen from this Table, SASS involvement was associated with significant improvement overall of approximately 4 (15.0 to 10.6), of nearly 2 on symptoms (6.8 to 5.0), and 2 on risk behaviors (3.8 to 2.1) and of 1 on functioning (4.3 to 3.5). All of these improvements were statistically significant and clinically meaningful. Careful review of these tables indicates a substantial amount of missing data for these analyses. This is primarily due to three causes. First, SASS workers were not required to submit a second CSPI if they only saw the child one time. Second, open cases at the end of the fiscal year did not include a final CSPI. Finally, some SASS workers failed to submit CSPI data on their closed cases.

**Table 5. FY05 SASS Outcomes by Provider, from Terminate CSPIs Received 07/01/04 through 06/30/05.**

| SASS Provider | # Clients with Screening & Terminate CSPIs qualifying for this report** | Mean CSPI Symptoms (max=15)* | | Mean CSPI Risk Behaviors (max=15)* | | Mean CSPI Functioning (Max=9)* | | Mean Total= Symp+Risk+Funct (max=39)* | |
|---|---|---|---|---|---|---|---|---|---|
| | | *Initial Screening+* | *Termination* | *Initial Screening+* | *Termination* | *Initial Screening+* | *Termination* | *Initial Screening+* | *Termination* |
| **Total** | **2887** | **6.83** | **5.00** | **3.84** | **2.10** | **4.28** | **3.45** | **14.95** | **10.55** |
| Ada S. McKinley C.S.Inc. | 244 | 7.15 | 6.77 | 3.74 | 3.30 | 4.65 | 4.51 | 15.54 | 14.58 |
| Ben Gordon Ctr | 26 | 6.77 | 6.50 | 4.19 | 3.73 | 3.81 | 3.58 | 14.77 | 13.81 |
| Bridgeway | 20 | 6.45 | 4.35 | 3.05 | 1.60 | 3.60 | 2.90 | 13.10 | 8.85 |
| Catholic Charities | 19 | 5.74 | 4.47 | 2.79 | 1.63 | 3.32 | 2.95 | 11.84 | 9.05 |
| Ctr for Children's Svs | 24 | 6.04 | 4.54 | 4.17 | 2.29 | 3.50 | 2.88 | 13.71 | 9.71 |
| CHAIL | 116 | 6.75 | 5.47 | 3.59 | 1.63 | 4.42 | 3.94 | 14.76 | 11.03 |
| Coles County MHA, Inc. | 48 | 6.44 | 4.29 | 3.35 | 2.08 | 3.17 | 3.50 | 12.96 | 9.88 |
| Community Care Options | 139 | 7.60 | 5.00 | 3.99 | 1.48 | 4.61 | 3.86 | 16.21 | 10.35 |
| Community Counseling Ctr/ Chgo | 210 | 6.22 | 4.92 | 3.35 | 2.00 | 4.44 | 3.93 | 14.01 | 10.86 |
| Comm Couns Ctr/ N Madison Cty | 3 | 3.33 | 3.00 | 2.67 | 2.33 | 3.67 | 3.00 | 9.67 | 8.33 |
| Comm MH Council | 26 | 6.81 | 4.23 | 3.58 | 2.04 | 3.81 | 2.27 | 14.19 | 8.54 |
| Comm Resource Ctr | | | | | | | | | |
| *Heartland Human Svs* | | | | | | | | | |
| Crosspoint Human Svs | 60 | 7.12 | 6.48 | 3.70 | 2.42 | 4.03 | 3.90 | 14.85 | 12.80 |

^ Received by NU between 7/1/04 and 6/30/05
* Higher CSPI scores indicate greater severity
** Only includes clients w/ initial screening CSPI completed
+ Refers to initial screening for "episode" of SASS services ending in termination of interest. "Episode" must be between 3-120 days

## Table 5 Continued

| SASS Provider | # Clients with Screening & Terminate CSPIs qualifying for this report ** | Mean CSPI Symptoms (max=15)* | | Mean CSPI Risk Behaviors (max=15)* | | Mean CSPI Functioning (Max=9)* | | Mean Total= Symp+Risk+Funct (max=39)* | |
|---|---|---|---|---|---|---|---|---|---|
| | | *Initial Screening+* | *Termination* | *Initial Screening+* | *Termination* | *Initial Screening+* | *Termination* | *Initial Screening+* | *Termination* |
| **Total** | **2887** | **6.83** | **5.00** | **3.84** | **2.10** | **4.28** | **3.45** | **14.95** | **10.55** |
| DuPage County HD | 73 | 6.51 | 4.71 | 4.12 | 2.12 | 4.22 | 3.30 | 14.85 | 10.14 |
| Egyptian Public & MHD | 35 | 7.29 | 5.29 | 4.74 | 1.80 | 4.80 | 3.83 | 16.83 | 10.91 |
| Family Counseling Ctr | 26 | 5.27 | 4.46 | 3.08 | 1.42 | 2.69 | 2.38 | 11.04 | 8.27 |
| Family Service Association/ Greater Elgin Area | 150 | 5.92 | 5.26 | 3.19 | 2.38 | 3.59 | 3.57 | 12.69 | 11.21 |
| Franklin-Williamson HS | 11 | 8.73 | 6.36 | 4.09 | 3.27 | 5.09 | 4.73 | 17.91 | 14.36 |
| Grand Prairie Services | 119 | 7.07 | 3.74 | 3.82 | 1.38 | 4.25 | 2.65 | 15.14 | 7.76 |
| Helen Wheeler Center | 25 | 7.00 | 5.92 | 3.44 | 2.80 | 4.44 | 3.76 | 14.88 | 12.48 |
| Heritage BHC | 49 | 6.27 | 4.45 | 3.90 | 1.63 | 3.94 | 2.63 | 14.10 | 8.71 |
| *DeWitt County HR Ctr* | | | | | | | | | |
| *Piatt County MHC* | | | | | | | | | |
| Human Service Center | 2 | 9.00 | 6.50 | 6.00 | 3.50 | 7.50 | 5.50 | 22.50 | 15.50 |
| Human Support Svs | | | | | | | | | |
| Institute for Human Res. | | | | | | | | | |
| Jane Addams | 26 | 7.73 | 4.85 | 4.38 | 1.77 | 5.00 | 3.46 | 17.12 | 10.08 |
| Janet Wattles Center | 79 | 6.16 | 4.85 | 4.72 | 2.39 | 3.77 | 3.23 | 14.66 | 10.47 |
| Jewish Children's Bureau | 20 | 5.80 | 4.30 | 2.90 | 1.70 | 3.55 | 3.05 | 12.25 | 9.05 |
| Kenneth W. Young Centers | 330 | 7.07 | 5.36 | 4.28 | 2.15 | 4.66 | 3.99 | 16.01 | 11.50 |
| Kids Hope United | 44 | 5.61 | 4.23 | 3.84 | 2.30 | 3.20 | 2.75 | 12.66 | 9.27 |
| Lake County Health Department | 106 | 6.95 | 5.84 | 4.58 | 3.24 | 4.48 | 4.01 | 16.02 | 13.08 |
| Leyden Family Service | 43 | 8.00 | 5.05 | 4.44 | 2.07 | 4.53 | 3.56 | 16.98 | 10.67 |
| Lutheran Social Service of IL | 67 | 6.04 | 3.49 | 3.57 | 1.15 | 4.30 | 2.28 | 13.91 | 6.93 |
| Macoupin County Community Mental Health | 123 | 5.06 | 3.56 | 3.37 | 1.53 | 3.25 | 2.50 | 11.67 | 7.59 |
| McHenry County Mental Health Board | 37 | 6.97 | 5.59 | 3.97 | 2.59 | 4.68 | 3.76 | 15.62 | 11.95 |
| McLean County Center for Human Services | | | | | | | | | |
| Mental Health Centers of Central Illinois | 116 | 6.77 | 5.85 | 3.43 | 2.34 | 4.05 | 3.72 | 14.25 | 11.92 |
| *Christian County MH* | 2 | 12.00 | 6.50 | 4.00 | 0.00 | 7.50 | 7.00 | 23.50 | 13.50 |
| *Logan County Health Dept* | 9 | 6.44 | 2.67 | 3.11 | 0.56 | 3.33 | 1.56 | 12.89 | 4.78 |
| Metropolitan Family Services | 37 | 6.46 | 4.92 | 3.38 | 2.11 | 3.19 | 2.76 | 13.03 | 9.78 |
| Mount Sinai Hospital | 14 | 6.64 | 2.43 | 3.64 | 0.57 | 4.71 | 2.36 | 15.00 | 5.36 |
| *Mujeres Latinas en Accion* | 13 | 8.23 | 7.77 | 4.85 | 2.77 | 5.23 | 5.15 | 18.31 | 15.69 |
| North Central Behavioral Health Systems | 74 | 6.27 | 5.55 | 3.61 | 2.58 | 3.80 | 3.55 | 13.68 | 11.69 |
| Robert Young Center | 58 | 9.02 | 6.28 | 4.19 | 3.28 | 5.02 | 3.97 | 18.22 | 13.52 |
| Schuyler County Mental Health Services | 5 | 7.20 | 3.80 | 4.80 | 2.20 | 4.40 | 3.00 | 16.40 | 9.00 |
| *Cass County MHC* | 7 | 7.14 | 5.29 | 4.86 | 3.57 | 5.14 | 2.14 | 17.14 | 11.00 |
| *Morgan Scott Mental Health* | 14 | 6.71 | 4.21 | 3.50 | 1.50 | 4.64 | 2.21 | 14.86 | 7.93 |
| Sinnissippi Centers, Inc. | 59 | 7.61 | 6.22 | 4.80 | 2.80 | 4.88 | 4.10 | 17.29 | 13.12 |
| Southeastern Illinois Counseling Centers, Inc. | 34 | 7.26 | 6.18 | 4.06 | 2.21 | 4.41 | 5.29 | 15.74 | 13.68 |
| Southern Illinois Regional Social Services | 34 | 5.24 | 4.50 | 3.03 | 2.29 | 3.15 | 3.18 | 11.41 | 9.97 |
| Transitions of Western Illinois | 99 | 6.28 | 4.72 | 3.78 | 1.78 | 3.52 | 3.14 | 13.58 | 9.64 |

^ Received by NU between 7/1/04 and 6/30/05
* Higher CSPI scores indicate greater severity
** Only includes clients w/ initial screening CSPI completed
+ Refers to initial screening for "episode" of SASS services ending in termination of interest. "Episode" must be between 3-120 days

Overall, there were no regional differences in outcomes, with all regions reporting an approximate four point improvement on the CSPI total. This change represents a substantial and clinically meaningful improvement. Similar patterns were observed for each of the scale scores. Thus, in general, outcomes were consistent across the state.

Boys tended to both enter and exit SASS services with higher assessed needs. Boys initiated SASS services 1.4 points higher than girls and terminated 1.1 points higher. Because they started with higher needs, boys benefited slightly more from SASS services than girls. This difference was statistically significant.

There do not appear to be racial disparities in overall outcomes. There were racial differences in severity of need at screening, with African American children and adolescents having the highest need and Asian children and adolescents having the lowest need. However, all racial groups had comparable improvements on average of about four points. The notable exception was the small number of Native American/Eskimo youth served. These six youth had a very high initial level and did not appear to benefit from SASS services.

While all age groups appeared to benefit from SASS services, children 12 and under appear to benefit somewhat more from SASS services than do adolescents 13 and older. Children had an improvement of more than four points while adolescents improved only 3.5 points on average. This difference is statistically significant.

A second means of using the CSPI is for an item level analysis to understand which needs move from 'actionable' levels to no longer being needs or prevention of relapse. In other words, by determining the numbers of children and youth who are rated as a '2' or '3' on each item who then are rated as a '0' or '1' at termination, it is possible to identify which individuals' needs are addressed by SASS for what percentage of individuals. Table 6 presents each of the individual items in terms of the percentage of children and youth with each of the four levels of severity at initiation and termination of SASS involvement. In order to interpret these data, one should compare the percentages of '3' and '2' ratings in the 'Initial Screening' section to those ratings in the 'Termination' column. For example, at Initial Screening 4% of children and youth have a '3' rating on Neuropsychiatric Disturbance indicating a dangerous or disabling level of psychosis. Only 1% of children and youth have this level of need at termination from SASS services. For Emotional Disturbance, the percentage of '3' ratings, which translates into a dangerous or disabling level of depression or anxiety, falls from 18% to 6%.

**Table 6. Percentage of children and youth rated at each of four levels of severity of need on the Childhood Severity of Psychiatric Illness (CSPI) at Initial Screening and Termination of SASS involvement**

| | INITIAL SCREEN | TERM SCREEN | INITIAL SCREEN | TERM SCREEN | INITIAL SCREEN | TERM SCREEN | INITIAL SCREEN | TERM SCREEN |
|---|---|---|---|---|---|---|---|---|
| Rating / CSPI Item | 0 | 0 | 1 | 1 | 2 | 2 | 3 | 3 |
| NEUROPSYCHIATRIC DISTURBANCE | 67 | 69 | 19 | 23 | 10 | 7 | 4 | 1 |
| EMOTIONAL DISTURBANCE | 5 | 8 | 28 | 47 | 50 | 40 | 18 | 6 |
| CONDUCT | 30 | 36 | 36 | 43 | 22 | 17 | 12 | 4 |
| OPPOSITIONAL BEHAVIOR | 16 | 18 | 35 | 48 | 34 | 28 | 15 | 6 |
| IMPULSIVITY | 9 | 15 | 28 | 48 | 40 | 30 | 22 | 7 |
| SUICIDE RISK | 36 | 55 | 25 | 39 | 23 | 5 | 16 | 2 |
| DANGER TO OTHERS | 32 | 49 | 30 | 41 | 24 | 9 | 14 | 2 |
| ELOPEMENT | 52 | 63 | 23 | 25 | 15 | 9 | 10 | 4 |
| CRIME/ DELINQUENCY | 70 | 72 | 17 | 17 | 9 | 8 | 5 | 3 |
| SEXUAL AGGRESSION | 90 | 92 | 6 | 6 | 3 | 2 | 1 | 1 |
| SCHOOL FUNCTIONING | 20 | 23 | 33 | 42 | 31 | 24 | 16 | 11 |
| FAMILY FUNCTIONING | 14 | 14 | 34 | 45 | 35 | 32 | 17 | 10 |
| PEER FUNCTIONING | 26 | 29 | 35 | 44 | 29 | 21 | 10 | 5 |
| ADJUSTMENT TO TRAUMA | 44 | 46 | 22 | 31 | 23 | 19 | 11 | 5 |
| MEDICAL CO-MORDIBITIES | 79 | 81 | 13 | 13 | 7 | 5 | 1 | 1 |
| SUBSTANCE ABUSE | 76 | 74 | 15 | 18 | 7 | 6 | 3 | 2 |
| ABUSE HISTORY | 58 | 59 | 19 | 23 | 14 | 12 | 9 | 6 |
| SEXUAL DEVELOPMENT | 84 | 84 | 9 | 11 | 4 | 3 | 3 | 2 |
| LEARNING PROBLEMS | 67 | 69 | 18 | 19 | 11 | 9 | 4 | 4 |
| CAREGIVER SUPERVISION | 53 | 57 | 32 | 33 | 12 | 9 | 3 | 2 |
| CAREGIVER MOTIVATION | 63 | 62 | 25 | 27 | 9 | 9 | 3 | 2 |
| CAREGIVER KNOWLEDGE | 58 | 62 | 30 | 30 | 9 | 7 | 3 | 1 |
| SAFETY | 72 | 77 | 20 | 19 | 6 | 3 | 2 | 1 |
| AVAILABILITY OF SERVICES | 76 | 82 | 17 | 14 | 5 | 3 | 1 | 1 |
| MULTISYSTEM INVOLVEMENT | 60 | 64 | 26 | 26 | 12 | 9 | 2 | 1 |

Review of the data presented in Table 6 suggests that much of the improvement observed in Table 5 comes from children and adolescents moving from ratings of '3' (dangerous or disabling requiring immediate or intensive services) to ratings of '2' (requires action) or '1' (watchful waiting/prevention). This is exactly the pattern of results expected for a crisis intervention program. In crisis intervention services, children and youth should move from 'immediate/intensive' needs to 'actionable' needs. For the most part, a very small percentage of children and youth exit SASS services with immediate/intensive service needs. However, the vast majority exit SASS with some

actionable service needs. For example, nearly half (46%) have continued treatment needs for Emotional Disturbance (e.g., depression and/or anxiety).

Interestingly, it appears that SASS has little or no impact on Substance Abuse. This is not surprising since the program was not designed for youth with these needs. Also, from these data, it appears that SASS has little impact on sexual-related problems as neither Sexual Aggression nor Sexual Development demonstrated significant improvements.

Figure 3 presents the percentage of SASS children and adolescents who are assessed at a '2' or a '3' on each of the five symptom categories, in other words, a need for treatment. Fourteen percent of children and youth presented with actionable (i.e. treatment) rating of psychosis at screening. Only 8% remained at that level at termination suggesting a number of reactive psychoses that were managed during the SASS episode of care. Emotional Disturbance (e.g., depression and anxiety) was the second most common symptom area and generally remained an actionable need even at termination. This is a symptom area that SASS must address by linking to appropriate services for ongoing treatment. About 45% of cases terminated with ongoing actionable needs in this area. SASS appeared quite successful at resolving issues of impulsivity. Nearly two thirds (63%) presented at screening with this need but only 37% still had an actionable level of assessed impulsivity at termination. Disruptive behavior disorders (Conduct and Oppositional) are relatively common and demonstrate significant improvements over the course of a SASS episode of care. However, it remains the case that for both children and adolescents with these problems at screening, the majority still have these needs at termination.

Figure 3. Percent of SASS children and adolescents with an actionable symptom at screening and termination

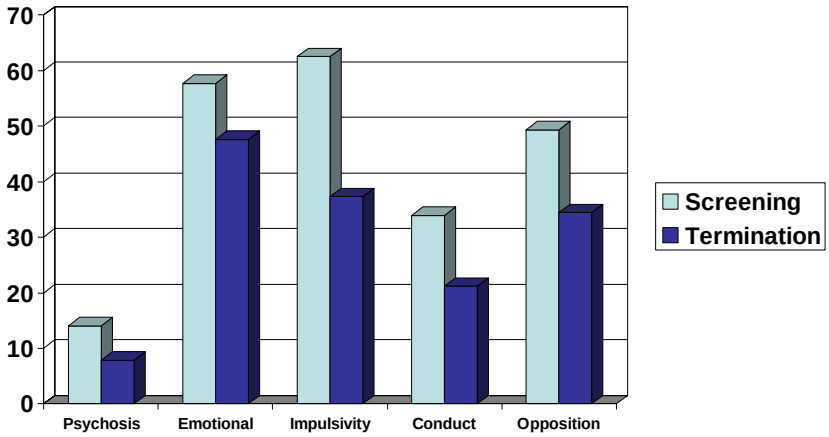
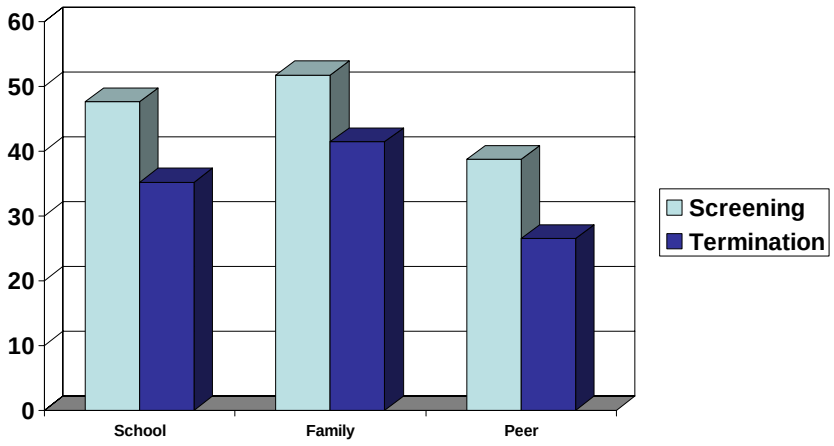



Figure 4 presents a similar analysis for the five risk behaviors assessed with the CSPI. Review of this table demonstrates the primary impact of the SASS episode of

care. In most cases, issues of Suicide Risk and Danger to Others are resolved within the SASS episode of care and only remained as issues to be monitored and/or prevented from recurring. Each of these risk behavior is 'actionable' in about one third of cases. Elopement is a need in 25% of cases but it not as commonly resolved during a SASS episode of care. Crime/delinquency and Sexual Aggression are both less frequent treatment needs and in most cases remain needs at the termination of the SASS episode. Figure 5 presents an item level analysis for the three functioning domains assessed by the CSPI. Review of these data suggests that while a number of children and adolescents resolve functioning problems, in the majority of cases, functioning needs presented at screening remain 'actionable' (i.e. treatment or service) needs at termination from SASS services. This finding is not surprising in that most research suggests that improvement in functioning domains is the hardest outcome to achieve for behavioral health services. *Despite this challenge, these results suggest that SASS involvement is associated with functional improvement.*

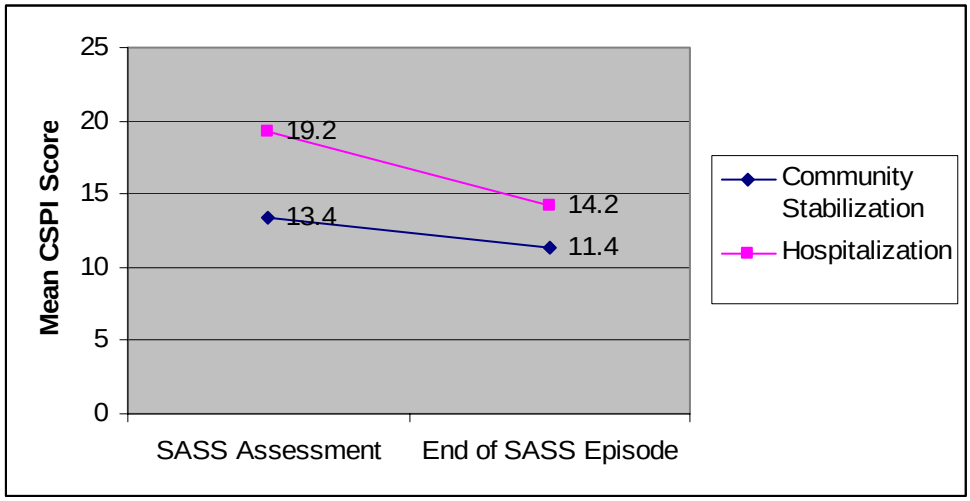
Figure 5. Percent of SASS children and adolescents with an actionable functioning at screening and termination




## Comparison of Hospital Outcomes to Intensive Community Intervention

Although it is clear from the decision analyses that children and youth who are hospitalized have significantly more needs than those who are treated with intensive community services (as also shown in Figure 6), methods exist that allow for a direct comparison of the outcomes associated with these two treatment approaches.

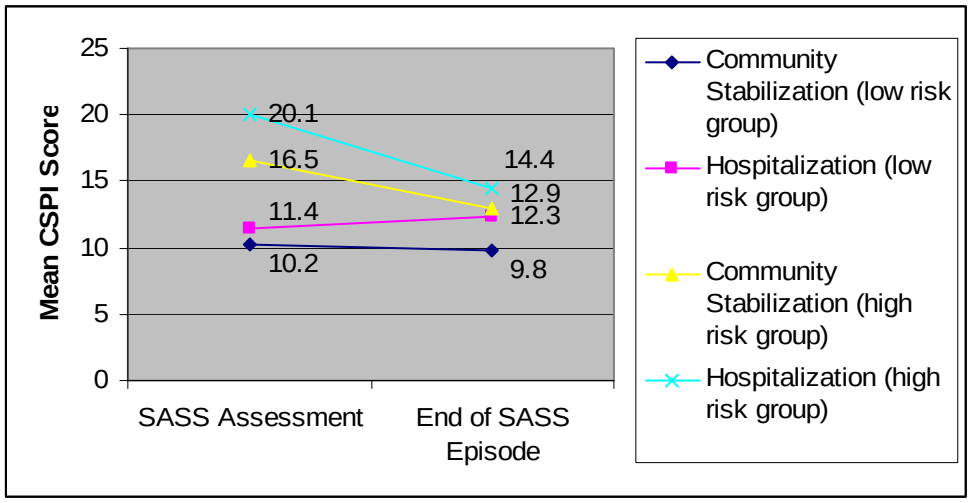
Figure 6. Change in Total CSPI Score Among Children With a SASS Episode (FY05)




Propensity score analysis is a method developed by health services researchers that allows for the statistical matching of individuals across treatment types to allow for direct comparisons of outcomes. We applied propensity score analysis by matching on demographic and clinical variables until the criteria for a valid comparison was met. For the full sample, receiving intensive community services was associated with statistically significantly better outcomes (i.e., reduction in total CSPI score) compared to psychiatric hospitalization (B=-0.664, 95% CI = [-1.344, -0.126], t=-2.06). This means that in a relative comparison across all children and youth served by SASS, intensive community services was associated with overall better clinical and functional improvement among those served.

We subdivided the sample into those who were predicted by the CSPI to be hospitalized and those who were predicted to be served in the community. The change in CSPI scores from assessment to the end of the SASS episode are shown in Figure 7. Propensity score analysis was again performed, this time separately for each of these two clinical samples. In these analyses, hospitalization was associated with statistically better outcomes for the high-risk children and youth (i.e., those predicted to be hospitalized) than community stabilization (B=1.989, 95% CI = [1.363, 2.594], t=6.04). For the lower-risk children and youth, intensive community services were associated with statistically better outcomes than hospitalization (B=-1.195, 95% CI = [-2.346, -0.017], t=-2.03). Further research is needed to determine the clinical cut-point at which psychiatric hospitalization becomes a more effective intervention than intensive community services.

Figure 7. Change in Total CSPI Score by Intervention and Hospitalization Risk Level (FY05)



## VII. PARTNER PERSPECTIVES

The SASS program was designed to operate within the fabric of the children's mental health service system. In fact, one of the state goals of the program is to improve the coordination of services within the system. As such, SASS services touch many people, and understanding the impact of the current SASS program should include some attention given to the perspectives of these various system partners. For the evaluation of the first year of the current SASS program, four perspectives were identified: parents/caregivers, SASS agencies/programs, hospitals, and community behavioral health providers. This section of the evaluation presents the results of surveys designed to assess the experience of each of these partners within the first year of SASS. Clearly, other important perspectives exist, including the youth's perspective, SASS worker's perspective, school's perspective, etc. Time and resources limited our capacity to sample all of these perspectives in the first year of the program.

### Parents'/Caregivers' Perspective

In order to maintain compliance with rules and regulations which require that all surveys be initiated by the health care provider, we surveyed parents and caregivers by having SASS workers distribute questionnaires in March 2005 to parents or caregivers whose children they had served. A Spanish language version of the questionnaire was available when needed. Potential respondents were given a stamped envelope addressed to the Mental Health Services and Policy Program of Northwestern University. A total of 240 parents/caregivers responded to the questionnaire. Given the method used to recruit respondents it was not possible to estimate the response rate (i.e. the percentage of caregivers who were given a survey compared to those who completed it).

Of the respondents, 62.1% were Caucasian, 24.4% were African American, 12% were Hispanic, and 0.4% were Asian. Respondents came from 51 different counties. Twelve respondents used the Spanish language version. The majority were biological parents (69%); however, 9.3% were legal guardians, 8.4% were adoptive parents, and 4.0% were foster parents. This profile is roughly comparable to the percentages observed for the population of children and families served. Table 7 presents the results for each of the specific questions on the survey. In addition, the respondents were asked for open-ended comments. Appendix B contains a listing of all comments.

**Table 7. Percent of Parents/Caregivers responding to each of the possible levels of satisfaction to survey questions.**

| | Poor | Fair | Good | Excellent |
|---|---|---|---|---|
| **Getting SASS services during your child's crisis** | | | | |
| How the CARES line responded to your concerns | 4.3 | 9.1 | 37.6 | 48.9 |
| How quickly SASS responded | 4.4 | 9.2 | 29.7 | 56.8 |
| How open the SASS worker was to your perspective and wishes | 3.9 | 6.4 | 23.2 | 66.5 |
| The availability of services to address your child's needs | 6.4 | 10.7 | 28.8 | 54.1 |
| How simple it was to make SASS follow-up appointments | 4.8 | 7.0 | 33.0 | 55.0 |
| The consistency with which SASS followed up with you after the initial crisis | 8.4 | 7.9 | 27.3 | 56.4 |
| **Appropriateness and Sensitivity** | | | | |
| SASS worker's sensitivity to your cultural, racial, gender, religious needs | 2.3 | 3.6 | 29.7 | 64.4 |
| Respect with which you and your children were treated | 2.7 | 3.5 | 19.9 | 73.9 |
| SASS worker's ability to speak in your language | 1.4 | 0.5 | 20.7 | 77.4 |
| SASS worker's ability to identify your child's strengths and skills | 4.6 | 5.5 | 29.0 | 61.0 |
| The opportunity for you and your Child to be involved in his/her SASS care planning | 7.7 | 6.4 | 29.5 | 56.4 |
| The plan you and your child developed to manage the crisis | 7.4 | 9.1 | 33.5 | 50.0 |
| **Outcomes** | | | | |
| Help your ability to manage your child's behavior | 8.3 | 18.4 | 36.8 | 36.4 |
| Help your child's ability to manage his/her own behavior | 9.7 | 20.4 | 35.0 | 35.0 |
| Impact of SASS services on your child's safety | 6.6 | 8.8 | 36.1 | 48.5 |
| Help with child's relationship to you and other in home | 10.8 | 16.1 | 37.7 | 35.4 |
| Overall improvement your child has made | 10.1 | 21.1 | 38.8 | 30.0 |
| **Global Satisfaction** | | | | |
| Overall quality of SASS services received by your child | 6.3 | 6.7 | 34.5 | 52.5 |

It appears that generally parents/caregivers are quite satisfied with the CARES line. Approximately one in five parents/caregivers did not answer the question regarding CARES. This reflects the fact that in a number of cases, parents are not the individuals who contact the CARES line seeking a SASS referral. In about one in five cases, the parent/caregiver had no role in this contact. However, in the about 7 in 10 cases (nearly 90% of those parents/caregivers who were involved), they experienced CARES as 'good' or 'excellent.' The parent/caregiver responses can be summarized as follows:

- In general, parents/caregivers were pleased with their access to SASS. Services were prompt and open to the parent's perspective, and were seen as consistent and useful in linkage and follow-up services.

- SASS workers were overwhelmingly seen as culturally sensitive, respectful, and strength-based. They were seen as helpful in the crisis and allowed a sufficient level of family involvement in care planning.

- The SASS experience was seen as generally helpful. Outcome satisfaction was a little lower than satisfaction with access and quality, but parents clearly saw SASS as helping to keep their children safe. Parents/caregivers also generally felt better able to manage their children's behavior, their children improved self-management of behavior, and relationships improved at home.

- The overall satisfaction with SASS was high: 87% rated it as 'good' or 'excellent.'

**SASS Program Perspective**

Two perspectives were solicited within SASS programs—the first was an agency director's perspective and the second the SASS program director's perspective. Both SASS contractors and subcontractors were sampled for this survey, resulting in a possible sample of 52 respondents for both perspectives.

**Agency Directors**. Agency Directors were identified for every agency that was contracted to provide SASS services and all agencies identified as subcontractors to these contracted agencies. They were surveyed by mail in February-March 2005. A total of 28 of 52 (54%) agency directors responded to the survey. Ten responded from Central Illinois, eight from Southern Illinois, three from Cook, four from the collar counties around Cook, and three from Northern Illinois. These agencies had a median three full-time and one part-time SASS workers, although the range was considerable.

**Table 8. Percent of Agency Directors endorsing the four levels of satisfaction with each item on the survey.**

| | Poor | Fair | Good | Excellent |
|---|---|---|---|---|
| **Access to SASS Services** | | | | |
| The responsiveness of the CARES line to your concerns | 7.1 | 42.9 | 42.9 | 7.1 |
| The appropriateness of referrals from CARES | 0.0 | 28.6 | 46.4 | 25.0 |
| The timeless and completeness of referrals from CARES | 10.7 | 25.0 | 50.0 | 14.3 |
| The ability to recruit SASS workers in your agency | 12.5 | 29.2 | 50.0 | 8.3 |
| The ability to retain SASS workers in your agency | 7.7 | 23.1 | 46.2 | 23.1 |
| The clarity of rules for SASS services | 17.9 | 57.1 | 14.3 | 10.7 |
| The responsiveness of the state to provider concerns | 46.4 | 32.1 | 7.1 | 14.3 |
| **Reimbursement** | | | | |
| The speed of reimbursement from Medicaid | 78.6 | 10.7 | 7.1 | 3.6 |
| The amount of reimbursement from Medicaid | 60.7 | 32.1 | 7.2 | 0.0 |
| The degree to which the SASS business model fits the clinical model | 46.4 | 39.3 | 10.7 | 3.6 |
| **Evaluation of SASS Services** | | | | |
| The burden of the Northwestern evaluation effort | 11.1 | 44.4 | 37.0 | 7.4 |
| The appropriateness of the CSPI for monitoring the status of children served in SASS | 25.0 | 28.6 | 35.7 | 10.7 |
| Support for training and technical assistance | 17.9 | 42.9 | 10.7 | 28.6 |
| The responsiveness of the evaluation team to your concerns | 14.8 | 33.3 | 25.9 | 14.8 |
| **Global** | | | | |
| Overall quality of the SASS services that you provide | 0.0 | 25.0 | 70.0 | 5.0 |
| Overall, how satisfied are you with the SASS expansion at this stage of its implementation | 46.4 | 35.7 | 10.7 | 7.1 |

In general, Agency Directors of agencies with SASS programs appear reasonably satisfied with the CARES line. There are some concerns about the responsiveness of the CARES lines to SASS agency concerns as nearly half of all respondents rated this item as Fair or Poor. The main concern of Agency Directors regards the speed and amount of reimbursement from Medicaid for SASS services. This perception is also manifest in the fact that the vast majority (86%) view the fit of the SASS business model and its clinical model as a 'Fair' or 'Poor' fit. This survey was taken before some agencies had

successfully shifted to the fee-for-service system so it will be important to track whether this is an implementation issue or a permanent problem with the model. Regardless of these concerns 75% of Agencies Directors thought that the quality of their SASS services was either 'Good' or 'Excellent.' However, primarily because of the financial aspects of the SASS program, Agency Directors are overall not particularly satisfied with the SASS program at the time of the survey as more than 80% rated it as 'Fair' or 'Poor.'

**SASS Program Directors.** SASS Program Directors were identified and sent surveys in February-March 2005. Respondents were given a stamped envelope and asked to return their surveys to the Mental Health Services and Policy Program at Northwestern University. A total of 32 of 52 (62%) Program Directors responded to the survey. Eleven programs in Central Illinois responded, 10 in Cook, four in both Northwestern and Southern Illinois, and three in the collar counties surrounding Cook.

**Table 9. Percent of SASS Program Directors endorsing the four levels of satisfaction with each item on the survey.**

| | Poor | Fair | Good | Excellent |
|---|---|---|---|---|
| **Access to SASS Services** | | | | |
| The responsiveness of the CARES line to your concerns | 9.4 | 42.2 | 38.7 | 6.5 |
| The appropriateness of referrals from CARES | 6.3 | 40.6 | 40.6 | 12.5 |
| The timeless and completeness of referrals from CARES | 12.5 | 37.5 | 40.6 | 9.4 |
| The ability to recruit SASS workers in your agency | 14.8 | 29.6 | 40.7 | 14.8 |
| The ability to retain SASS workers in your agency | 9.4 | 9.4 | 27.4 | 34.4 |
| The clarity of rules for SASS services | 21.9 | 31.3 | 40.6 | 6.3 |
| The responsiveness of the state to provider concerns | 37.5 | 46.9 | 9.4 | 6.3 |
| **Financial Aspects** | | | | |
| Your ability to pay staff enough to recruit and retain good people | 31.3 | 46.8 | 15.6 | 6.3 |
| The financial viability of the SASS program | 53.1 | 37.5 | 6.3 | 3.1 |
| The degree to which the SASS business model fits the clinical model | 62.5 | 21.9 | 15.6 | 0.0 |

## Table 9 Continued

| | Poor | Fair | Good | Excellent |
|---|---|---|---|---|
| **Evaluation of SASS Services** | | | | |
| The burden of the Northwestern evaluation effort | 11.1 | 44.4 | 40.7 | 3.7 |
| The appropriateness of the CSPI for monitoring the status of children served in SASS | 9.4 | 50.0 | 37.5 | 3.1 |
| Support for training and technical assistance | 6.3 | 46.9 | 34.4 | 12.5 |
| The responsiveness of the evaluation team to your concerns | 15.4 | 30.8 | 42.3 | 11.5 |
| **Outcomes of SASS Services** | | | | |
| Impact of SASS services on parent's ability to help manage child's behavior | 3.1 | 31.3 | 59.5 | 6.3 |
| Impact of SASS services on the child's ability to manage his/her own behavior | 0.0 | 28.1 | 65.6 | 6.3 |
| Impact of SASS on the child's safety | 0.0 | 6.3 | 65.6 | 28.1 |
| Impact of SASS on the child's relationship with family and others in the home | 0.0 | 31.3 | 59.4 | 9.4 |
| Overall improvement children make during SASS episode | 0.0 | 31.3 | 59.4 | 9.4 |
| **Global** | | | | |
| Overall quality of the SASS services that you provide | 3.1 | 12.9 | 58.1 | 25.8 |
| Overall, how satisfied are you with the SASS expansion at this stage of its implementation | 34.4 | 48.8 | 18.8 | 3.4 |

In general, SASS Program Directors were somewhat more satisfied with the SASS program than were their Agency Directors. Generally, the CARES line performance was rated in the 'Fair' to 'Good' range. Program Directors shared their Agency Directors' perspective on the financial aspects of the SASS program. In general, there was dissatisfaction with the fit between the business model and the clinical model. However, SASS Program Directors perceive their services to be effective and of 'Good' to 'Excellent' quality.

## Hospital Perspective

Seventy hospitals were identified that might admit children with psychiatric disorders or at minimum assess them in their emergency departments. Of these, 55 (79%) were successfully contacted by phone in July-August 2005. Representatives of 20 of these hospitals felt that they had no experience with SASS or such minimal experience that they could not reasonably provide an evaluation perspective. Thirty-five hospitals did have representatives who felt sufficiently experienced with SASS to comment on the

program. A total of 40 individuals representing these 35 hospitals participated in the survey.

Nearly half (46%) of the hospital respondents (16) were located in Cook County and an additional six (15%) were located in the surrounding counties. Ten hospital respondents (25%) were located in Central Illinois. Six hospital representatives from Northern Illinois participated. No hospitals from Southern Illinois were represented in the survey.

Over half (63%) of the hospitals admitted children (22). Sixteen of these were general hospitals with child and adolescent units and six were stand alone psychiatric hospitals. Of the remainder, seven were general hospitals without units and six were general hospitals with only adult psychiatric admissions.

Most respondents were social workers, crisis workers, case managers, or nursing staff. Great effort was made to identify the most appropriate hospital respondent for the survey. Twenty-eight percent of respondents stated they had very frequent contact with CARES and SASS. Thirty percent stated that they had frequent contact. Twenty percent of respondents stated they had somewhat frequent contact and 20% said they had infrequent contact. Table 10 presents the overall data across all hospital representatives.

**Table 10. Percent of Hospital Representatives endorsing the four levels of satisfaction with each item on the survey.**

| | **Poor** | **Fair** | **Good** | **Excellent** | |
|---|---|---|---|---|---|
| **Overall Quality of CARES Line** | 10 | 38 | 47 | 5 | |
| **Overall SASS Quality** | 13 | 21 | 43 | 23 | |
| **Satisfaction with the timeliness of the SASS response** | **Dissatisfied** 13 | | **Neutral** 10 | **Satisfied** 48 | **Extremely Satisfied** 23 |

Review of these data suggests that, in general, representatives of the hospital perspective are satisfied with CARES and SASS. Their assessment of SASS quality is higher than their assessment of CARES quality. Review of comments (see the Appendix) suggests that variability in the quality and professionalism of CARES staff might account for some of this difference. A significant minority of respondents were not convinced that CARES line staff have sufficient qualifications to make the judgments they are making in the current program design (n=10, 25%).

Looking at satisfaction by hospital type, it is clear that psychiatric hospitals are less satisfied with CARES and SASS than other hospitals. No representative rated either CARES or SASS quality as 'excellent,' compared to about 25% of respondents of other hospital types. In addition, hospitals with child and adolescent units were less satisfied than general hospitals that did not admit children (18% versus 0% rating SASS overall quality 'poor').

It is recommended that reading all the comments available in the Appendix is a helpful method for those wishing to get a good feel for how hospital representatives evaluate CARES and SASS. In general, it is a positive assessment. However, hospitals that have child and adolescent beds or units are less satisfied with SASS than hospitals that do not admit children and adolescents. There are likely at least two possible reasons for this disparity:

1. Hospitals which admit children and adolescents have a higher level of expertise in clinical assessment and treatment. It would be natural for these hospitals to view the CARES and SASS processes as an intrusion in a clinical process in which they feel they bring considerable expertise.
2. There is an essential financial conflict of interest when hospitals provide crisis assessments and hospital admissions because in order to make a hospital business model work, it is necessary to keep hospital admissions high enough to maintain bed census. Thus any process that threatens a reduction in hospital admissions might be seen as a threat to the financial viability of the hospital unit.

## Community Mental Health Provider Perspective

Community Mental Health Centers that do not have SASS programs represent another important perspective in understanding the functioning of the SASS programs. These community providers are sometimes primary referral sources through the CARES line to engage SASS services for clients they serve.

Sixty-six community agencies were identified from lists provided by the Department of Human Services. Surveys were sent to each of these agencies in July 2005 and 34 responded (52%). Table 11 presents the findings from the satisfaction ratings on this survey.

**Table 11. Percent of Community Mental Health Providers endorsing the four levels of satisfaction with each item on the survey.**

| | Poor | Fair | Good | Excellent |
|---|---|---|---|---|
| **Access to SASS Services** | | | | |
| The responsiveness of the CARES line to your agency | 0.0 | 33.3 | 46.7 | 20.0 |
| The appropriateness of CARES dispositions | 3.2 | 38.7 | 35.5 | 22.6 |
| The timeless and completeness of referrals from CARES | 9.7 | 22.6 | 51.6 | 16.1 |
| The clarity of rules for SASS referrals | 21.2 | 39.4 | 33.3 | 6.1 |
| The responsiveness of the state to provider concerns about CARES and SASS | 29.6 | 40.7 | 22.2 | 7.4 |

**Table 11 Continued**

| | Poor | Fair | Good | Excellent |
|---|---|---|---|---|
| **Appropriateness and Sensitivity** | | | | |
| SASS worker's sensitivity to the child's cultural, racial, gender, religious needs | 0.0 | 19.4 | 54.8 | 25.8 |
| Respect with which the child and family were treated | 6.5 | 19.4 | 48.4 | 25.8 |
| Respect with which your staff were treated | 9.4 | 12.5 | 41.9 | 32.3 |
| SASS worker's ability to speak the family's language | 0.0 | 12.0 | 64.0 | 24.0 |
| The opportunity for your staff to be involved in the SASS care planning | 38.7 | 22.6 | 25.8 | 12.9 |
| The plan developed to manage future crises | 25.0 | 43.8 | 25.0 | 6.3 |
| **Outcomes of SASS Services** | | | | |
| Help the parent/caregiver's ability to help manage their child's behavior | 23.3 | 40.0 | 33.3 | 3.3 |
| Help the child's ability to manage his/her own behavior | 20.0 | 40.0 | 40.0 | 0.0 |
| Impact of SASS on the child's safety | 13.3 | 33.3 | 40.0 | 13.3 |
| Impact on your agency's ability to serve the child and family | 20.0 | 40.0 | 40.0 | 0.0 |
| Overall improvement children make during SASS episode | 25.8 | 32.3 | 32.3 | 9.7 |
| **Global** | | | | |
| Overall quality of the CARES interactions that your agency has experienced | 18.8 | 18.8 | 50.0 | 12.5 |
| Overall quality of the SASS services your agency has experienced | 18.8 | 34.4 | 37.5 | 9.4 |

It appears from the findings above that the community providers are the least satisfied of any of the partners with the CARES and SASS program. In particular, the 39% 'poor' rating with regard to SASS involving the community providers in the service planning process is notable. This might suggest that in SASS' efforts to be more inclusive with parents and youth in regard to service planning, they have been less successful in fully including community providers in this process. The parent survey indicates that caregivers are generally satisfied with being included, while the community provider survey indicates an area for improvement.

Community providers are somewhat less satisfied with the responsiveness of the CARES line and with the dispositions made by CARES compared with other partners. Similar to the hospital survey, it does appear that other professionals who are expert in

the treatment of children and adolescents are often unhappy with another professional evaluating (e.g., 'second guessing') their attempt to refer a child to SASS. Similarly, the community providers are not particularly satisfied with SASS' plan for future crises. Of course, given their perceived lack of involvement in the planning process, it is not surprising that they are generally dissatisfied with the outcomes of that process.

## VIII. SUMMARY AND RECOMMENDATIONS

The totality of the evaluation data presented above suggests that the implementation of the CARES line and the provision of SASS services to all Medicaid eligible children and adolescents has been a qualified success:

- A substantial number of children and adolescents have been served.
- Parents are generally pleased with the services.
- SASS providers feel that they are able to deliver a high quality product.
- Other system partners are generally satisfied with SASS.
- Decision-making with regard to the use of intensive community services and psychiatric hospitalization appears to be rational.
- Outcomes are generally good. Intensive community interventions appear to be particularly effective at reducing symptoms and risk behaviors and improving functioning.

There do appear to be some areas for improvement. These can be summarized as follows:

- Providers who also serve children and adolescents do not always feel included in the SASS service delivery process.
- There is some variable concern about the professionalism of the CARES line staff and the manner in which they interact with referring individuals.
- SASS providers have some concerns about the viability of the business model and some have struggled to shift to a fee-for-service model.
- Variation across providers in terms of both decision-making and outcomes suggest that the SASS model has not been consistently implemented across the state.

While the evaluation effort this year has attempted to pull together data from multiple sources and address the most pressing questions with regard to understanding the impact of SASS on children and families, a number of questions remain unanswered. Among the questions that should be addressed through future evaluation efforts are the following:

- What is the youth perspective on CARES and SASS services?
- What is the differential parent/caregiver perspectives on intensive community services versus psychiatric hospital treatment?
- What is the cut-point at which the clinical benefits of psychiatric hospitalization outweigh those of intensive community interventions? Can that decision-model be communicated to SASS providers and psychiatrists in a way that improves practice?
- Can provider performance be improved through the use of report cards and other feedback and technical assistance strategies?

- Can we better understand racial and cultural factors? Why do African American children and youth present at a higher level of need? Why do Native Americans fair poorly?

The results of the present evaluation indicate that SASS is an effective program with a number of addressable issues identified that, if resolved, could lead it to be an even more effective program. Clearly FY06 priorities should include improving communication and collaboration, ensuring that the business model and the clinical model reinforce each other, and addressing performance variability among providers.